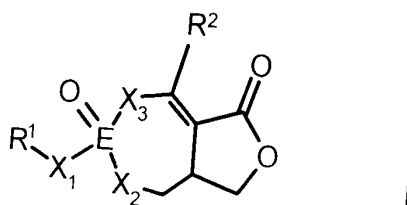


We claim:

1. A compound of formula I



wherein

$R^1$  is

- (a) a carbon chain having 2 to 30 carbon atoms, which can be straight-chain or branched, saturated or unsaturated, carbo- or heterocyclic, and in which the carbon chain is optionally mono- or disubstituted by a radical selected from:

- (a)(1)  $-OH$ ,
  - (a)(2)  $=O$ ,
  - (a)(3)  $-O-C_1-C_6$ -alkyl, in which alkyl is linear or branched,
  - (a)(4)  $-O-C_2-C_6$ -alkenyl, in which alkenyl is linear or branched,
  - (a)(5)  $-C_1-C_6$ -alkyl, in which alkyl is linear or branched,
  - (a)(6)  $-aryl$ ,
  - (a)(7)  $-C_1-C_6$ -alkylbenzene,
  - (a)(8)  $-diphenyl$ ,
  - (a)(9)  $-NH-C_1-C_6$ -alkyl, in which alkyl is linear or branched,
  - (a)(10)  $-NH-C_2-C_6$ -alkenyl, in which alkenyl is linear or branched,
  - (a)(11)  $-NH_2$ ,
  - (a)(12)  $=S$ ,
  - (a)(13)  $-S-C_1-C_6$ -alkyl, in which alkyl is linear or branched,
  - (a)(14)  $-S-C_2-C_6$ -alkenyl, in which alkenyl is linear or branched, and
  - (a)(15) halogen,
- in which the substituents (a)(1) to (a)(15) are optionally additionally substituted, or

(b) - [-aryl-(CH<sub>2</sub>)<sub>n</sub>]<sub>m</sub>, wherein [-aryl-(CH<sub>2</sub>)<sub>n</sub>]<sub>m</sub> is unsubstituted, or mono- or disubstituted by a radical as described in (a)(1) to (a)(15), and n and m independently of one another are integers zero, 1, 2, or 3;

R<sup>2</sup> is

C<sub>1</sub>-C<sub>6</sub>-alkyl, wherein alkyl is unsubstituted, or mono- or disubstituted by a radical as described in (a)(1) to (a)(15),

C<sub>2</sub>-C<sub>6</sub>-alkenyl, wherein alkenyl is unsubstituted or mono- or disubstituted by a radical as described in (a)(1) to (a)(15), or

C<sub>2</sub>-C<sub>6</sub>-alkynyl, wherein alkynyl is unsubstituted or mono- or disubstituted by a radical as described in (a)(1) to (a)(15);

E is a phosphorus (P) or sulfur (S) atom; and

X<sub>1</sub>, X<sub>2</sub>, and X<sub>3</sub> are each selected independently from

-O-,

-NH-,

-N=,

-S-,

-CH<sub>2</sub>-, and

-CHR<sup>2</sup>-;

in any stereochemical form, or a mixture of any stereochemical forms in any ratio, or a physiologically tolerable salt or chemical equivalent thereof.

2. A compound as claimed in claim 1, wherein R<sup>1</sup> is a carbon chain having 10 to 18 carbon atoms, which can be straight-chain or branched, saturated or unsaturated, carbo- or heterocyclic, wherein the carbon chain is unsubstituted, or mono- or disubstituted by a radical as described in (a)(1) to (a)(15).

3. A compound as claimed in claim 1, wherein

R<sup>1</sup> is selected from

-(CH<sub>2</sub>)<sub>15</sub>CH<sub>3</sub>,

$-(CH_2)_{13}CH(CH_3)_2$ ,  
 $-(CH_2)_{11}CH(OH)(CH_2)_3CH_3$ ,  
 $-(CH_2)_{11}CH(OH)CH_2CH(CH_3)_2$ ,  
 $-(CH_2)_{12}CH(OH)(CH_2)_2CH_3$ ,  
 $-(CH_2)_{13}CH(OH)CH_2CH_3$ ,  
 $-(CH_2)_{14}CH(OH)CH_3$ ,  
 $-(CH_2)_{15}CH_2(OH)$ ,  
 $-(CH_2)_{16}CH_3$ ,  
 $-(CH_2)_{13}C=OCH_2CH_3$ ,  
 $-(CH_2)_{12}C=OCH_2CH_2CH_3$ ,  
 $-(CH_2)_{11}C=OCH_2CH_2CH_2CH_3$ ,  
 $-(CH_2)_{13}CH_3$ ,  
 $-(CH_2)_{11}CH(CH_3)_2$ ,  
 $-(CH_2)_{14}CH_3$ , and  
 $-(CH_2)_{12}CH(CH_3)_2$ .

4. A compound as claimed in claim 1, wherein  $R^2$  is  $C_1$ - $C_6$ -alkyl.
5. A compound as claimed in claim 4, wherein  $R^2$  is selected from  $-CH_3$ ,  $-CH_2CH_3$ , and  $-CH_2CH_2CH_3$ .
6. A process for the preparation of a compound as claimed in any one of claims 1 to 5, comprising fermenting the microorganism *Streptomyces* species HAG 004107, DSM 13381, or one of its variants or mutants under suitable conditions in a culture medium until at least one of said compounds accumulates in the culture medium, isolating said at least one compound from the culture medium, and optionally converting said at least one compound into a chemical equivalent or physiologically tolerable salts thereof.
7. The compound prepared by the process as claimed in claim 6.
8. The process as claimed in claim 6, wherein the fermenting is carried out under aerobic conditions at a temperature between about 18 and 35°C.

9. The process as claimed in claim 6, wherein the fermenting is carried out at a pH between about 6 and 8.
10. A method for inhibiting at least one lipase, comprising administering at least one compound claimed in any one of claims 1 to 5 to a patient in need thereof.
11. A method of treating diabetes, comprising administering at least one compound as claimed in any one of claims 1 to 5 to a patient in need thereof.
12. A pharmaceutical composition, comprising at least one compound as claimed in any one of claims 1 to 5, and a pharmaceutically acceptable carrier.
13. A process for the production of the pharmaceutical composition as claimed in claim 12, comprising bringing the at least one compound into a suitable administration form by adding at least of a suitable excipient or vehicle.
14. Isolated *Streptomyces* species HAG 004107, DSM 13381.